

IN THE CLAIMS:

1-29. **(Canceled)**

30. **(New)** A method comprising:

identifying a communication capability of a remote device;

dynamically aggregating, if necessary, multiple media access controllers (MACs), based, at least in part, on the identified communication capability of the remote device, to establish a virtual data sub-channel within a physical data channel for communication between a communication interface and the remote device;

determining whether a data rate of the virtual sub-channel is compatible with the communication capability of the remote device; and

reducing the data rate of the virtual sub-channel if the data rate is not compatible with the communication capability of the remote device.

31. **(New)** A method according to claim 30, wherein the communication link is an IEEE 802.3ae compliant communication link, with a data channel of 10 gigabit per second (Gb/s).

32. **(New)** A method according to claim 30, wherein identifying a communication capability of the remote device comprises:

sending a capability request; and

receiving a response to the request denoting at least the communication capability of the remote device.

33. (New) A method according to claim 30, wherein identifying a communication capability of the remote device comprises:

receiving an indication from the remote device denoting the communication capability of the remote device.

34. (New) A method according to claim 33, wherein the indication also denotes a processing capability of the remote device.

35. (New) A method according to claim 30, wherein the communication capability of the remote device is obtained by the communication interface through a negotiation process.

36. (New) A method according to claim 30, wherein establishing the virtual data sub-channel within a physical Ethernet data channel comprises establishing a sub-10 gigabit per second (Gb/s) virtual data channel within a physical 10Gb/s data channel.

37. (New) A method according to claim 30, wherein reducing the data rate of the virtual sub-channel comprises inserting idle control elements between substantive frames of a data stream of the virtual sub-channel.

38. (New) A method according to claim 36, wherein establishing the virtual sub-channel comprises:

aggregating, if necessary, 1Gb/s media access controllers (MACs) to establish the virtual sub-channel; and

dynamically multiplexing the 1Gb/s MACs to appropriate channels of an attachment unit interface (AUI).

39. (New) A storage medium comprising content which, when executed by an accessing computing appliance, causes the appliance to implement a scalable network interface to:

aggregate, if necessary, multiple media access controllers (MACs) to establish a virtual channel within a physical Ethernet channel based, at least in part, on an identified communication capability of a remote network element;

determine whether a data rate of the virtual channel is compatible with the communication capability of the remote device; and

further reduce the data rate of the virtual channel if the data rate is not compatible with the communication capability of the remote device.

40. (New) A storage medium according to claim 39, wherein the physical Ethernet channel is a 10 gigabit per second (Gb/s) data channel, while the virtual channel is a sub-10Gb/s data channel, wherein the size of the virtual channel is selected to correspond with the identified communication capability of the remote network element.

41. (New) A storage medium according to claim 39, the scalable network interface comprising negotiation feature(s) to identify one or more of a communication capability of a remote device and a processing capability of a remote device.

42. (New) A storage medium according to claim 39, wherein the scalable network interface establishes a virtual channel by dynamically aggregating one or more 1Gb/s media access

controller(s) (MAC) and routing content from the aggregated MAC(s) through one or more attachment unit interface (AUI) channel(s), as appropriate.

43. (New) An apparatus comprising:

control logic, to identify a communication capability of a remote device communicatively coupled with the apparatus through a communication link; and

a plurality of media access controllers (MACs), responsive to the control logic, aggregated by the control logic to establish a 10 gigabit per second (Gb/s) physical channel, or a sub-10Gb/s virtual channel within the 10Gb/s physical channel to facilitate communication from the apparatus to the remote device based, at least in part, on the identified communication capability of the remote device, wherein the control logic further to determine whether a data rate of the established channel is compatible with the communication capability of the remote device and cause the aggregation of MACs to reduce the data rate of the established channel if the data rate is not compatible with the communication capability of the remote device.

44. (New) An apparatus according to claim 45, further comprising:

an attachment unit interface (AUI), coupled with the MAC(s), the AUI having four (4) 10Gb/s attachment unit interface (XAUI) channels, each channel supporting up to 2.5Gb/s communication rates which are aggregated to provide the 10Gb/s physical channel.

45. (New) An apparatus according to claim 44, wherein the plurality of MAC(s) include 1Gb/s MAC(s), and wherein one or more 1Gb/s MAC(s) are dynamically selected to establish a sub-10Gb/s virtual channel within the 10Gb/s physical channel.

46. (New) An apparatus according to claim 45, wherein up to two 1Gb/s MAC(s) are coupled to a XAUI channel, wherein when so coupled each XAUI channel selectively provides 1Gb/s virtual channel resolution within the 10Gb/s physical channel.

47. (New) The apparatus of claim 43, the attachment unit interface comprising:
at least four (4) 10 gigabit attachment unit interface (XAUI) channel(s), wherein content from up to two (2) 1Gb/s MAC(s) are selectively routed through each of the four XAUI channels such that each XAUI channel supports 1Gb/s virtual channels.